

Introducing liq. phase reactants into reaction chamber - by passing liq. into vaporiser contg. microporous packing then transporting vapour to reactor using carrier gas

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Abstract

A predetermined flow of liq. is passed into a vaporiser contg. a microporous packing at constant temp. A carrier gas transports the vaporised liq. to a chemical, e.g. vapour deposition, reactor. The packing acts as a buffer store by adsorbing the liq. and, during continuous operation, the vaporiser is at steady state with liq. feed rate equal to vapour exit rate. A tubular vaporisation chamber (5) is fed via a liq. inlet (6) and carrier gas inlet (7). Vaporised reactant exits at the bottom (8). A porous packing (9) at the centre of the chamber (5) is fed with liq. by a tube (10) and surrounded by heater elements (11).
USE/ADVANTAGE - For control of liq. reactant concns. esp. in chemical vapour deposition reactors. The appts. smooths out fluctuations in liq. feed due to bubble formation, gas flow variation, etc. encountered in existing systems